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ABSTRACT

A longitudinal analysis was conducted of school performance by children enrolled in kindergarten between 1968 and 1978. The total Follow Through Program was studied, as well as each of the seven teaching models, focusing on achievement, school experience type, absence, and prekindergarten data. A base-year and a later year were identified for each comparison. The percentages of children remaining at or above the 50th percentile, nationally, in reading and mathematics achievement were compared for Follow Through versus the non-Follow Through comparison group. Data indicated that only the Educational Development Center Model had a consistent positive, long-term effect on children's post-program achievement (grades 4-9). Two models appeared to have a positive effect on children's achievement during program years: the Behavior Analysis Model and the Philadelphia Process Model. The Follow Through Program, studied as a single unit, appeared to have a positive effect on mathematics achievement during both program and post-program years. Prekindergarten experience or low absence rate appeared to have a long-term positive effect on mathematics achievement participating in four of the seven models. (Author/GDC)

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# LONGITUDINAL ANALYSIS OF FOLLOW THROUGH PARTICIPANTS 1968-69 THROUGH 1977-78

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**Report Number 7971**

**June, 1979**

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## ABSTRACT

This report describes the results of a strictly longitudinal analysis of school performance by children who were enrolled in the Original Follow Through Program. By definition, a longitudinal study means that the progress of the same individual child or group of children is studied over a number of years. This kind of study was made of the total Follow Through Program and each model, focusing on: achievement, school experience type, absence and prekindergarten data, from the Follow Through Longitudinal File.

A base year and a later year were identified for each comparison. The percentage of children remaining at or above the National 50th Percentile in Total Reading and Total Mathematics, as measured by the California Achievement Test, in the later year of each two year comparison was calculated. The percentages were compared for Follow Through versus the Non-Follow Through comparison group. Whenever a difference occurred, of 2 or more percentage points for post-program years or 4 or more percentage points for program years, a difference was said to exist. A summary of the number of comparisons in which the Follow Through Program and Models achieved higher, lower, or the same school achievement as Total Non-Follow Through is presented.

Data indicate only the Educational Development Center Model (EDC) had a consistent consistent positive, long term effect on children's post-program (grade 4 to grade 9) achievement in Reading and Mathematics.

Two models appeared to have a positive effect on children's achievement during program years: the Behavior Analysis Model for Total Reading and Philadelphia Process Model for Total Mathematics. The Total Follow Through

Program, studied as a single unit, appeared to have a positive effect on Mathematic achievement for both program and post-program years. When examining the effect on achievement of a Follow Through Model combined with prekindergarten experience or low absence rate, it appeared those variables had a long term positive effect on achievement in Total Mathematics for children attending the Behavior Analysis, Bank Street, Educational Development Center, and Philadelphia Process Models.

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# LONGITUDINAL ANALYSIS OF FOLLOW THROUGH PARTICIPANTS 1968-69 THROUGH 1977-78

## I. Introduction

### A. Statement of Purpose

This report describes the results of a strictly longitudinal analysis of school performance of children who were enrolled in the Original Follow Through Program. By definition, a longitudinal study means that the progress of the same individual child or group of children is studied over a number of years. The report describes results of program year (kindergarten to grade 3) and post-program year (grade 4 to grade 9) comparison of school achievement between the Follow Through Program and models and a Non-Follow Through comparison group.

The evaluation unit has consistently reported on cross-sectional achievement, (same grade, but different pupil comparisons) for the K-3 program years. It has also regularly provided quasi-longitudinal analyses, i.e., cross-sectional performance dimensioned by length of program exposure, prekindergarten experience and absence and applied not only to program but to post-program grades. The Unit is now finally able to complete the full achievement analysis context by providing strictly longitudinal analyses (same pupil, different grade) to complement the two types of cross-sectional information supplied in the past.

In the following, there will be separate sections providing a description of the Original Follow Through Program and each instructional approach (model), the data base available for this study, the analysis employed, and the findings.

B. Background

In 1968, the School District of Philadelphia was invited by the U.S. Office of Education to participate in a nationwide early childhood project known as Follow Through. The overall purpose of the Follow Through project was (and continues to be) to study, (1) the effectiveness of 22 exemplary approaches (models) to the education and development of young children, and (2) methods of instituting diversification and innovation at early elementary school levels. A major goal of the project was the systematic strengthening and expanding of the gains made by Head Start (in Philadelphia, by Get Set Day Care, Prekindergarten Head Start) and other established pre-school programs.

The Follow Through Program included the following components: (1) instruction, (2) parent involvement, (3) medical and dental services, (4) nutrition, (5) psychological services, (6) social services, and (7) staff and career development. Of the 22 instructional models, seven were implemented in Philadelphia (each will be described in section C): (1) Bank Street (BS), (2) Behavior Analysis (BA), (3) Bilingual-Bicultural (BI), (4) Education Development Center (EDC), (5) Florida Parent Education (FP), (6) Parent Implemented (PI), and (7) The Philadelphia Process Approach (PP). The program operated at the Kindergarten to Grade 3 levels. (The Florida Parent Education, FP, model ceased affiliation with Philadelphia in 1977-1978.)

Following six years of operation a Title I Evaluation and Review Committee, mandated by the courts, recommended that the Follow Through Program in Philadelphia be expanded. That recommendation resulted in the Title I Expansion Program and the Primary Skills Program which began in 1974-75 and was based on instructional "options" derived from the two most

successful original models in Philadelphia at the time, Bank Street and Behavior Analysis.

In 1977-1978, the U.S. Office of Education decided to rigidly enforce the Title I educational deprivation criterion--which is directly contradictory to Follow Through guidelines--and this decision had a strong negative effect on both the original and the Title I Expansion programs, since all children performing above the 50th %ile in designated reading areas became ineligible. Title I Funds removed from these two programs were restored to local Follow Through auspices to develop a new program, Project Bridge, which operates in 18 schools new to the Follow Through Programs in Grades 2-4 emphasizing the best element of Follow Through in a concept-learning context.

C. Description of Follow Through Instructional Models

The Bank Street Model (BS), is based on "cognitive-orientation theory." Emphasis is on the learning of academic skills through an experiential approach in which the child's social environment is an important element in the learning process. This approach has been termed one of "developmental interaction." Curriculum goals emanate not only from the children's individual interests but also from adult/child and child/child interests. The classroom setting is one in which a variety of interests centers, multipurpose tables, display sections, and materials are easily accessible to the children. The language experience approach, based on real life experiences through environmental studies, is key to this model.

The Behavior Analysis Model (BA), evaluated as one of the more instructionally successful models, is based on changing, modifying and analyzing behavior via positive reinforcement. Emphasis is on basic skills, i.e., reading, arithmetic,

and handwriting, using programmed materials and token reinforcement paired with verbal praise to induce learning. Usually in the classroom there are three instructional groups. The teacher, who is the team instructional leader, assumes the role of reading instructor. The classroom aide takes the major role in reinforcing mathematics learning, while the parent scholar works with handwriting and spelling. Slight variations may occur within an individual school. Tokens are earned for correct responses and later exchanged for the child's choice of a desired activity or position.

The Bilingual-Bicultural Model (BI), is based on cultural identity, development and appreciation, emphasis is on Spanish and English instruction in nine major areas; visual, auditory, motor, pre-writing, idea and concept formation, vocabularly-building, mathematics, English as a second language, Spanish as a second language, and of course, Spanish and English as a first language. Bicultural experiences are also an integral part of the program. The classroom setting is essentially one of small group instruction. Groups are organized according to language facility. The children are given the opportunity to work at one of several classroom learning centers, or may select independent activities.

The Educational Development Center Model (EDC), is based on the replicable teaching practices of the British Infant School. The EDC Model develops its own unique curriculum by mirroring the needs of the children, as well as employing individual talents, competencies and styles of teachers. An open classroom setting is organized to make learning materials readily available so that children may choose learning tasks from other relevant options. Teachers are encouraged to maintain an activity-centered environment and are asked to intermittently substitute small group and individual child contacts for whole group instruction.

The Florida Parent Education Model (FP), is based on the theory that the home is a very important element to a child's education. To support this philosophy every FP room has the distinctive feature of having a specially trained classroom aide, known as a "Parent Educator." The parent educator assists in the classroom and also makes periodic visits to the homes of the children in the class. The home visits are designed to reinforce the fact that learning takes place at home as well as at school. In addition, the parent educator demonstrates learning tasks to the parent for use with a child at home. Teachers and parent educators receive special training by model sponsors, who, in turn, remain available for constant consultation. The classroom setting concentrates on individualized instruction and task development with parental imput and employment.

The Parent Implemented Model (PI), is based on the recognition of the value of community/parental involvement in the educational process. The model attempts to fuse the "positive power elements" of the community and the home into partnerships designed to unearth resources, accountability and commitment for learning improvements. The classroom setting utilizes the Philadelphia Process approach curriculum.

The Philadelphia Process Approach Model focuses on the systematic development of the cognitive skills of the individual child. These skills or processes, named and implemented in the American Association for the Advancement of Science curriculum: Science - A Process Approach, are observing, communicating, classifying, measuring, using numbers, using space/time relations, inferring and predicting. Using the science program as one functioning model of a process based curriculum, this approach to early childhood education develops "go along with" methods and materials in other

areas such as Language Arts, Social Studies, Mathematics and the Expressive Arts. The classroom setting is totally managed by the teacher, but in order to provide a variety of experiences, carefully planned use of peer leaders, aides and parent volunteers as instructional assistants accentuates the teacher's role. Active participation and physical activity in learning is encouraged in and outside of school.

## II. Description of Procedures

### A. Overview

The longitudinal analysis was performed separately for the Follow Through program years (Kindergarten to Grade 3) and the post-program years (Grade 4 to Grade 9). In order to have the same test context for all comparisons, the analyses were restricted to Grades 1-9 where the California Achievement Test (CAT) is used; a different test, the Stanford Early School Achievement Test (SESAT) is used in Kindergarten. However, the determination of exposure for program includes Kindergarten. The following general procedure was applied.

1. Identification of the base year to which later performance was compared. Generally, the base year was Grade 1 for program years and Grade 3 for post-program years; except for those years when end of year achievement testing occured. These exceptions will be described fully in the next section.

2. Identification of those children whose performance during the base year was at or above the National 50th Percentile.*

* There were too few students scoring below the National 16th Percentile, during base year, to study the relative trends of that group.

3. Calculation of the percentage of children remaining at or above the National 50th Percentile in succeeding years.

4. Comparison of the percentage of Follow Through children remaining above the National 50th Percentile with Non-Follow Through children.

5. Count the number of comparisons in which the Follow Through groups had a higher, lower, or the same percentage of children remaining at or above the National 50th Percentile as the Non-Follow Through group.

B. Description of Data Base

Table 1 illustrates the number of cohorts examined, (a cohort is a group of children who are studied from Kindergarten until they leave the school system) and the number of grades for each cohort up to 1977-78.

TABLE 1

Grades and Years for Each Follow Through Cohort
From Entering Kindergarten 1968-69
to Entering Kindergarten 1977-78

COHORTS BY GRADES

| COHORTS # | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | | | | | | | | | | |
| 1968-69 | K | | | | | | | | | |
| 1969-70 | 1 | K | | | | | | | | |
| 1970-71 | 2 | 1 | K | | | | | | | |
| 1971-72 | 3 | 2 | 1 | K | | | | | | |
| 1972-73 | 4 | 3 | 2 | 1 | K | | | | | |
| 1973-74 | 5 | 4 | 3 | 2 | 1 | K | | | | |
| 1974-75 | 6 | 5 | 4 | 3 | 2 | 1 | K | | | |
| 1975-76 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | K | | |
| 1976-77 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | K | |
| 1977-78 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | K |

Several characteristics about this chart must be noted:

1. The California Achievement Test (CAT) replaced the Iowa Test of Basic Skills in 1973-1974.

2. Mid-year achievement testing replaced end of year testing during 1974-1975.

3. Because of 1 and 2 above; the 1974-1975 grades for cohorts #1, 2, and 3 (i.e., grades 6, 5, 4) are identified as the base year/grades for comparison rather than grade 3.

Therefore, the following comparisons were the basis for this report.

| Cohort | Post Program Comparison | | |
|---|---|---|---|
| 1 | 6 vs 7; | 6 vs 8, | 6 vs 9 |
| 2 | 5 vs 6; | 5 vs 7, | 5 vs 8 |
| 3 | 4 vs 5; | 4 vs 6, | 4 vs 7 |
| 4 | 3 vs 4; | 3 vs 5 | 3 vs 6 |
| 5 | 3 vs 4 | 3 vs 5 | |
| 6 | 3 vs 4 | | |

| Cohort | Program Year Comparisons | |
|---|---|---|
| 5 | 2 vs 3 | |
| 6 | 1 vs 2; | 1 vs 3 |

No program year comparisons were made for cohorts #7, 8, 9, and 10 because comparison data were not available.

The Non-Follow Through comparison groups were obtained from two sources: The Follow Through Longitudinal File and the City Wide Test File. The Non-Follow Through comparison groups that were built into the Follow Through Longitudinal File were limited to cohorts 3, 4, 5, and 6, (i.e., a four cohort set obtained prior to absorption into the Expansion Program that was in grade 1 to grade 4 in 1974-1975 and moved to grade 4 to grade 7 in

1977-78). The comparison data for cohorts 1 and 2 were generated from the City Wide Test File by selecting children from Title I schools who were not on the Follow Through file. This procedure allowed all comparisons to be made among children in Title I schools, some of whom had Follow Through experience while others did not.

C. Analysis

In all comparisons, a difference is considered to exist between Follow Through and Non-Follow Through whenever the percentage of children remaining at or above the National 50th percentile rank differs by two or more percentile points during post-program years, and four or more percentage points during program years. Further, the number of comparisons in which the Follow Through groups had a higher, lower, or the same percentage of children remaining at or above the National 50th percentile ranks is presented in the text. The N for comparisons was set at a minimum of 20. The actual data used in the comparisons are placed in the Appendix.

The findings are presented below in a question and answer format. Several questions will be addressed to the longitudinal performance of Follow Through participants and "graduates" as they progressed through the grades.

## III. Findings

Note: In each of the following questions the phrase "higher school performance" is used. Whenever a group is said to have achieved "higher school performance" it means that more children in that group remained at or above the National 50th percentile rank (NPR), in the later year of the two year comparison than did children in the other group.

The general format used below is as follows: the question is raised, the major finding is presented, followed by a discussion of other relevant trends in the data.

A. Did children with maximum exposure to the Follow Through Program, i.e., the program as a whole regardless of model (TFT) show higher school performance than children in the Non-Follow Through group (TNFT)?

(Since this question is the only one in which the total Follow Through Program (TFT) is compared with TNFT, the issues of maximum exposure, prekindergarten experience, and absence effect will be addressed under the one question, these issues will be addressed individually for the Follow Through models under questions B, C, and D.)

Results of the program year comparisons showed TFT children achieved the same level as TNFT in all comparisons for Total Reading, but usually higher in Total Mathematics. The post-program year comparisons showed TFT children achieved the same or higher school performance, compared to TNFT, in a majority of the comparisons for Total Mathematics but not for Total Reading.

Data reported in Tables 2, 3, and 4 were used to answer this question. The focus was on the TFT group rather than individual models. The tables display data for children with, (a) Maximum Exposure to a model (Table 2) and Maximum Exposure combined with either, (b) Prekindergarten Experience (Table 3) or (c) 0-15 days of absence (Table 4). Regarding Total Reading, Table 2 shows TFT achieved the same school performance as TNFT in 3 out of 3 comparisons during program years. Regarding Total Reading in the post-program years, TFT achieved higher school performance in 4 out of 15 comparisons;

lower school performance in 9 out of 15 comparisons, and the same school performance in 2 out of 15 comparisons. TFT performed somewhat better in Total Mathematics for both program and post-program year comparisons. Specifically, TFT achieved higher school performance than TNFT in Total Mathematics in 2 out of 3 program year comparisons and in 7 out of 14 post-program year comparisons. The same relative pattern of achievement occurred between TFT and TNFT when the effects of prekindergarten experience and low absence were studied. One notable exception occurred regarding TFT children with low absence. Data reported in Table 4 show those children achieved higher school performance in all program year comparisons for Total Mathematics. However, only a few comparisons were able to be made for the program years, therefore this finding must be interpreted with caution.

B. Did children with maximum exposure in a specific Follow Through Model show higher school performance when compared to children in Non-Follow Through Schools?

Results of program year comparisons showed two models achieved higher school performance in 3 out of 3 comparisons with TNFT; the Behavior Analysis Model (BA) in Total Reading and the Philadelphia Process Model (PP) in Total Mathematics. The post-program year comparisons showed the Educational Development Center Model (EDC) consistently achieved higher school performance when compared to TNFT, in Total Reading (11 out of 14 comparisons) and Total Mathematics (10 out of 12 comparisons).

TABLE 2

A Summary of the Program and Post-Program Year Comparisons Between Follow Through and Non Follow Through Based on Total Reading and Total Mathematics Scores of the California Achievement Test for Children with Maximum Exposure In a Model

Program Years (First Grade to Grade 3)

| | TOTAL READING | | | TOTAL MATHEMATICS | | |
|---|---|---|---|---|---|---|
| | Higher | Lower | Same | Higher | Lower | Same |
| BS | 2* | 0 | 1 | 1 | 1 | 1 |
| BA | 3 | 0 | 0 | 0 | 1 | 2 |
| BI | 0 | 3 | 0 | 0 | 1 | 2 |
| EDC | -** | - | - | 0 | 1 | 1 |
| FP | 2 | 0 | 1 | 1*** | 0 | 0 |
| PI | 2 | 0 | 1 | 1 | 0 | 0 |
| PP | 1 | 0 | 2 | 3 | 0 | 0 |
| TFT | 0 | 0 | 3 | 2 | 0 | 1 |

Post-Program Years (Grade 4 to Grade 9)

| | TOTAL READING | | | TOTAL MATHEMATICS | | |
|---|---|---|---|---|---|---|
| | Higher | Lower | Same | Higher | Lower | Same |
| BS | 3 | 9 | 0 | 5 | 4 | 3 |
| BA | 1 | 9 | 2 | 3 | 8 | 1 |
| BI | 1 | 3 | 1 | 1 | 1 | 1 |
| EDC | 11 | 3 | 0 | 10 | 2 | 0 |
| FP | - | - | - | - | - | - |
| PI | - | - | - | 2 | 0 | 0 |
| PP | 4 | 7 | 1 | 5 | 3 | 4 |
| TFT | 4 | 9 | 2 | 7 | 6 | 1 |

* The numbers listed in the Table represent the number of comparisons in which the Follow Through Program or Model had a higher, lower, or the same percentage of children remaining at or above the National 50th percentile in the second year of a two year comparison.

** A hyphen (-) indicates that less than 20 children met the criteria for analysis which resulted in the model being omitted from the comparison.

*** For this model only one case met the criteria for comparison.

TABLE 3

A Summary of the Program and Post-Program Year Comparisons Between Follow Through and Non Follow Through Based on Total Reading and Total Mathematics Scores of the California Achievement Test for Children with Maximum Exposure In a Model and Prekindergarten Experience.

Program Years (First Grade to Grade 3)

| | TOTAL READING | | | TOTAL MATHEMATICS | | |
|---|---|---|---|---|---|---|
| | Higher | Lower | Same | Higher | Lower | Same |
| BS | 2* | 0 | 1 | 1 | 1 | 1 |
| BA | 3 | 0 | 0 | 3 | 0 | 0 |
| BI | 0 | 3 | 0 | 0 | 2 | 1 |
| EDC | 0 | 2 | 1 | 0 | 0 | 3 |
| FP | -** | - | - | - | - | - |
| PI | 2 | 0 | 0 | 1*** | 0 | 0 |
| PP | 0 | 1 | 2 | 2 | 0 | 1 |
| TFT | 1 | 0 | 2 | 1 | 0 | 2 |

Post-Program Years (Grade 4 to Grade 9)

| | TOTAL READING | | | TOTAL MATHEMATICS | | |
|---|---|---|---|---|---|---|
| | Higher | Lower | Same | Higher | Lower | Same |
| BS | 3 | 9 | 0 | 5 | 5 | 2 |
| BA | 1 | 9 | 2 | 4 | 8 | 0 |
| BI | 0 | 1 | 1 | 1 | 1 | 1 |
| EDC | 7 | 2 | 2 | 6 | 3 | 0 |
| FP | - | - | - | - | - | - |
| PI | - | - | - | - | - | - |
| PP | 5 | 7 | 0 | 6 | 5 | 1 |
| TFT | 1 | 9 | 2 | 5 | 6 | 1 |

* The numbers listed in the Table represent the number of comparisons in which the Follow Through Program or Model had a higher, lower, or the same percentage of children remaining at or above the National 50th percentile in the second year of a two year comparison.

** A hyphen (-) indicates that less than 20 children met the criteria for analysis which resulted in the model being omitted from the comparison.

*** For this model only one case met the criteria for comparison.

TABLE 4

A Summary of the Program and Post-Program Year Comparisons Between Follow Through and Non Follow Through Based on Total Reading and Total Mathematics Scores of the California Achievement Test for Children with Maximum Exposure In a Model Who Were Absent 0-15 Days in Both Comparison Years.

Program Years (First Grade to Grade 3)

| | TOTAL READING | | | TOTAL MATHEMATICS | | |
|---|---|---|---|---|---|---|
| | Higher | Lower | Same | Higher | Lower | Same |
| BS | 1* | 0 | 2 | 1 | 0 | 2 |
| BA | 3 | 0 | 0 | 3 | 0 | 0 |
| BI | 0 | 0 | 1 | - | - | - |
| EDC | 1 | 0 | 2 | 2 | 0 | 1 |
| FP | -** | - | - | - | - | - |
| PI | 1 | 0 | 0 | - | - | - |
| PP | 2 | 0 | 1 | 3 | 0 | 0 |
| TFT | 2 | 0 | 1 | 3 | 0 | 0 |

Post-Program Years (Grade 4 to Grade 9)

| | TOTAL READING | | | TOTAL MATHEMATICS | | |
|---|---|---|---|---|---|---|
| | Higher | Lower | Same | Higher | Lower | Same |
| BS | 2 | 6 | 1 | 3 | 4 | 2 |
| BA | 2 | 9 | 1 | 2 | 6 | 2 |
| BI | - | - | - | - | - | - |
| EDC | 3 | 0 | 0 | 3 | 0 | 0 |
| FP | - | - | - | - | - | - |
| PI | - | - | - | - | - | - |
| PP | 2 | 6 | 1 | 7 | 0 | 2 |
| TFT | 2 | 8 | 2 | 6 | 4 | 2 |

* The numbers listed in the Table represent the number of comparisons in which the Follow Through Program or Model had a higher, lower, or the same percentage of children remaining at or above the National 50th percentile in the second year of a two year comparison.

** A hyphen (-) indicates that less than 20 children met the criteria for analysis which resulted in the model being omitted from the comparison.

Data reported in Table 2 were used to answer this question. The question seeks to identify models which have a lasting positive effect on children's achievement. The program year comparisons provide an indication of intermediate effect while the post-program year comparisons provide an indication of long term effect.

Two other models, namely Bank Street (BS) and Philadelphia Process (PP), achieved the same or higher post-program school performance in Total Mathematics for a majority of the comparisons with TNFT. It is interesting to note that the BA model, which evidenced a positive intermediate effect, did not continue to achieve higher school performance during post-program years.

C. Did children with prekindergarten experience followed by maximum exposure in a specific Follow Through Model achieve higher school performance than children in Non-Follow Through schools?

Results of program year comparisons (Table 3) showed the BA Model achieved higher school performance, when compared to TNFT, in all comparisons for Total Reading and Total Mathematics. Results of post-program year comparisons showed the EDC Model achieved higher school performance, when compared to TNFT, in 7 out of 11 comparisons for Total Reading and in 6 out of 9 comparisons for Total Mathematics.

Three other models displayed in Table 3 achieved the same or higher school performance, when compared to TNFT, in at least half of the comparisons for Total Mathematics; they were: Philadelphia Process (PP), Bank Street (BS), and Behavior Analysis (BA). These data indicate prekindergarten experience may have a lasting positive effect on Mathematics achievement when combined with the Follow Through Models listed above.

D. Did children with maximum exposure in a specific Follow Through Model who were absent fewer than 15 days (in each of the comparison years) achieve higher school performance than children in Non-Follow Through schools?

Results of program year comparisons (Table 4) showed the BA Model achieved higher school performance, when compared to TNFT, in Total Reading and Total Mathematics; and the PP Model in Total Mathematics, for all comparisons. Results of post-program year comparisons showed the EDC Model achieved higher school performance, when compared to TNFT, for all comparisons in Total Reading and Total Mathematics.

The PP Model during the program years achieved higher school performance, compared to TNFT, in 7 out of 9 comparisons for Total Mathematics. In addition, the BA Model achieved the same or higher school performance, when compared to TNFT, in 5 out of 9 comparisons for Total Mathematics.

E. Did one or more of the Follow Through Models consistently achieve higher school performance in the post-program years when compared to TNFT?

Since the findings reported for questions A, B, C, and D above indicate children having maximum exposure in the EDC Model achieved higher school performance, when compared to TNFT, in more comparisons than any other model in the post-program years, the response to this question will focus on the model. The summary data reported in Table 5 were used to answer the question. (Since only one cohort reached grade nine and only one comparison was possible that cohort will be eliminated from the discussion below.)

The data reported in Table 5 indicate the EDC Model maintained the same relative pattern of achievement across grade levels, with one exception. A difference of 2 fewer comparisons favoring the EDC Model occurred between grade 4 and grade 5. One factor which may have had an effect on achievement at that point, was that the level of the California Achievement Test changed at grade 5. However, eliminating that one exception, the EDC Model maintained higher school performance in all or most of the comparisons with TNFT at each post-program grade.

TABLE 5

Number of Comparisons at Each Post-Program Grade, in Which the Educational Development Center Model (EDC) Achieved Higher School Performance When Compared to Total Non-Follow Through.

| Grade | Total Number Comparisons | Number Comparisons Favoring EDC |
|---|---|---|
| 4 | 6 | 6 |
| 5 | 6 | 4 |
| 6 | 6 | 5 |
| 7 | 6 | 5 |
| 8 | 4 | 4 |
| 9 | 1 | 0 |

## IV. General Conclusions

Based on the longitudinal analysis reported, the following general conclusions were reached.

1. The Follow Through Program taken as a whole, appeared to have a positive effect on achievement in Total Mathematics for both program and post-program years.

2. Two models appeared to have a positive effect on children's achievement during program years; the Behavior Analysis Model for Total Reading and the Philadelphia Process Model for Total Mathematics.

3. One model, the Educational Development Center (EDC) Model, appeared to have a consistent long term positive effect (i.e., post-program years) on children's achievement in Total Reading and Total Mathematics.

4. When studying the effect on achievement of a Follow Through Model combined with prekindergarten experience or low absence rate it appeared those variables had a long term positive effect on achievement in Total Mathematics for children attending the Behavior Analysis, Bank Street, Educational Development Center, or Philadelphia Process Models.

## V. Discussion and Recommendations

The findings reported above indicate the Behavior Analysis Model (BA) had a positive intermediate effect (i.e., during the program years) on children's reading and mathematics achievement, and on math achievement in post-program years when there was prekindergarten experience. That finding is consistent with many earlier cross-sectional and quasi-longitudinal results but not all especially as regards long-term quasi-longitudinal findings. However, the finding described above regarding the consistent, positive, long-term effect demonstrates by "graduates" of the Educational

Development Center Model (EDC) has not occurred before. The questions that emerge are numerous. Why do children perform well during program years but not during post program years? Why do children in the EDC Model demonstrate higher school performance when studied longitudinally but not cross-sectionally, and vice versa for BA in many respects? (The long term effects of EDC experience are standard expectations of that model, but this is the first consistent evidence for that result.) Some of the recommendations listed below address these issues; however, continuing investigation is necessary, and the Evaluation Unit plans to engage in this type of on-going study.

During the course of the longitudinal analyses reported above, several issues arose which led the author to make the following recommendations.

1. The present analysis focused on the number of students remaining at or above the 50th NPR from a base year to a later year or two year comparison. If a difference existed among the Follow Through Models, with respect to the percentage of students who were at or above the 50th NPR during the early years of the program, that difference may affect the numbers used in this report for the base year and consequently have a bearing on percentages retained at or above the 50th NPR in a post-program years.

2. A change in level of the California Achievement Test occurs at the third fifth, seventh, and in Philadelphia the tenth grade. A general determination of the effect on achievement of the change in test level may be valuable.

3. Future investigations are planned which will look at performance in terms of the lower half of the national norm distribution also, i.e., in terms of percentages, (a) below the 16th, and (b) between the 16th and 49th

percentiles. This will allow better determination of degrees of variation between models and hopefully provide some further clues as to the puzzling BA and EDC findings noted above.

4. A longitudinal file is presently being constructed which is comprised of Title I Non-Follow Through children who can provide a consistent comparison data for the more recent cohorts. This was not available for the present study.

5. In addition to continued investigations of a descriptive nature, the evaluation unit is planning a more statistically oriented design, which might use Analysis of Variance to verify/compare findings.

As a final statement, it should be noted that this was an initial attempt at presenting strictly longitudinal data that has provided some new perspectives and raised many questions that it is unable to answer. The studies to follow will be more comprehensive and better directed as a result, however, and would not have been so without this initial kind of investigation.

# APPENDIX A

Cohort - entered "K" in 1973-74

TABLE 1

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1976-77 Early Grade 3 Later Year 1977-78 Later Grade 4

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 88 | 42 | 76 |
| BA | 138 | 67 | 64 |
| BI | 75 | 26 | 69 |
| EDC | 86 | 29 | 86 |
| FP | 30 | 10 | 40 |
| PI | 33 | 14 | 79 |
| PP | 102 | 46 | 63 |
| TFT | 552 | 234 | 69 |
| TNFT | 2042 | 747 | 73 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 88 | 48 | 58 |
| BA | 139 | 95 | 42 |
| BI | 75 | 34 | 56 |
| EDC | 87 | 42 | 57 |
| FP | 31 | 19 | 37 |
| PI | 32 | 12 | 42 |
| PP | 99 | 51 | 55 |
| TFT | 441 | 301 | 50 |
| TNFT | 2069 | 852 | 55 |

Cohort - entered "K" in 1972-73

TABLE 2

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1975-76 Early Grade 3 Later Year 1976-77 Later Grade 4

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 90 | 42 | 64 |
| BA | 137 | 78 | 53 |
| BI | 70 | 22 | 73 |
| EDC | 102 | 33 | 79 |
| FP | 34 | 15 | 67 |
| PI | 38 | 17 | 76 |
| PP | 100 | 45 | 73 |
| TFT | 571 | 252 | 66 |
| TNFT | 1965 | 766 | 72 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 90 | 51 | 39 |
| BA | 136 | 97 | 36 |
| BI | 69 | 25 | 48 |
| EDC | 102 | 48 | 67 |
| FP | 34 | 19 | 53 |
| PI | 38 | 24 | 58 |
| PP | 100 | 63 | 48 |
| TFT | 569 | 327 | 47 |
| TNFT | 1975 | 891 | 52 |

Cohort - entered "K" in 1972-73

TABLE 3

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1975-76 Early Grade 3 Later Year 1977-78 Later Grade 5

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 89 | 42 | 31 |
| BA | 135 | 78 | 40 |
| BI | 64 | 17 | 65 |
| EDC | 100 | 34 | 56 |
| FP | 32 | 14 | 36 |
| PI | 36 | 16 | 44 |
| PP | 93 | 41 | 37 |
| TFT | 549 | 242 | 42 |
| TNFT | 1933 | 762 | 54 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 87 | 51 | 59 |
| BA | 133 | 96 | 41 |
| BI | 63 | 22 | 64 |
| EDC | 102 | 49 | 65 |
| FP | 32 | 17 | 47 |
| PI | 36 | 22 | 64 |
| PP | 95 | 57 | 47 |
| TFT | 548 | 314 | 52 |
| TNFT | 1947 | 891 | 58 |

Cohort - entered "K" in 1971-72

TABLE 4

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 3 Later Year 1975-76 Later Grade 4

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 84 | 33 | 79 |
| BA | 146 | 79 | 67 |
| BI | 43 | 9 | 89 |
| EDC | 100 | 36 | 72 |
| FP | 35 | 5 | 100 |
| PI | 12 | 5 | 80 |
| PP | 71 | 41 | 78 |
| TFT | 491 | 208 | 74 |
| TNFT | 1117 | 443 | 70 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 84 | 43 | 60 |
| BA | 145 | 102 | 53 |
| BI | 43 | 8 | 75 |
| EDC | 100 | 47 | 66 |
| FP | 35 | 8 | 13 |
| PI | 12 | 7 | 57 |
| PP | 72 | 42 | 55 |
| TFT | 491 | 257 | 56 |
| TNFT | 1108 | 501 | 55 |

Cohort - entered "K" in 1971-72

TABLE 5

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 3 Later Year 1976-77 Later Grade 5

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 84 | 32 | 59 |
| BA | 147 | 77 | 53 |
| BI | 43 | 7 | 57 |
| EDC | 107 | 39 | 64 |
| FP | 36 | 5 | 40 |
| PI | 12 | 5 | 40 |
| PP | 69 | 40 | 38 |
| TFT | 498 | 205 | 53 |
| TNFT | 1122 | 444 | 52 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 83 | 43 | 58 |
| BA | 147 | 102 | 45 |
| BI | 43 | 7 | 43 |
| EDC | 108 | 51 | 69 |
| FP | 36 | 8 | 63 |
| PI | 12 | 7 | 29 |
| PP | 70 | 40 | 73 |
| TFT | 499 | 258 | 56 |
| TNFT | 1121 | 503 | 63 |

Cohort - entered "K" in 1971-72

TABLE 6

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 3 Later Year 1977-78 Later Grade 6

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 85 | 33 | 52 |
| BA | 148 | 80 | 50 |
| BI | 44 | 9 | 78 |
| EDC | 102 | 39 | 54 |
| FP | 36 | 5 | 40 |
| PI | 12 | 5 | 20 |
| PP | 70 | 41 | 46 |
| TFT | 497 | 212 | 50 |
| TNFT | 1106 | 437 | 59 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 85 | 44 | 55 |
| BA | 148 | 104 | 49 |
| BI | 44 | 7 | 57 |
| EDC | 103 | 51 | 63 |
| FP | 37 | 8 | 38 |
| PI | 12 | 7 | 43 |
| PP | 71 | 42 | 60 |
| TFT | 500 | 263 | 50 |
| TNFT | 1096 | 498 | 61 |

Cohort - entered "K" in 1970-71

TABLE 7

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 4 Later Year 1975-76 Later Grade 5

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 95 | 45 | 40 |
| BA | 158 | 64 | 64 |
| BI | 82 | 20 | 25 |
| EDC | 132 | 35 | 46 |
| FP | 46 | 8 | 63 |
| PI | 30 | 14 | 50 |
| PP | 99 | 40 | 40 |
| TFT | 642 | 226 | 48 |
| TNFT | 647 | 228 | 57 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 92 | 35 | 69 |
| BA | 156 | 40 | 80 |
| BI | 81 | 15 | 80 |
| EDC | 133 | 37 | 68 |
| FP | 47 | 6 | 67 |
| PI | 30 | 7 | 71 |
| PP | 96 | 24 | 79 |
| TFT | 635 | 164 | 74 |
| TNFT | | | |

Cohort - entered "K" in 1970-71

TABLE 8

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 4 Later Year 1976-77 Later Grade 6

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 95 | 43 | 47 |
| BA | 160 | 62 | 50 |
| BI | 83 | 20 | 25 |
| EDC | 130 | 34 | 68 |
| FP | 50 | 9 | 67 |
| PI | 32 | 15 | 60 |
| PP | 102 | 41 | 41 |
| TFT | 652 | 224 | 50 |
| TNFT | 662 | 231 | 56 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 92 | 34 | 76 |
| BA | 159 | 41 | 68 |
| BI | 83 | 15 | 80 |
| EDC | 128 | 37 | 70 |
| FP | 50 | 6 | 67 |
| PI | 32 | 8 | 75 |
| PP | 99 | 24 | 75 |
| TFT | 643 | 165 | 73 |
| TNFT | 655 | 162 | 67 |

Cohort - entered "K" in 1970-71

TABLE 9

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 4 Later Year 1977-78 Later Grade 7

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 92 | 42 | 45 |
| BA | 149 | 58 | 50 |
| BI | 74 | 18 | 56 |
| EDC | 122 | 32 | 63 |
| FP | 44 | 9 | 56 |
| PI | 33 | 15 | 60 |
| PP | 98 | 41 | 37 |
| TFT | 612 | 215 | 50 |
| TNFT | 619 | 218 | 53 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 85 | 34 | 41 |
| BA | 146 | 36 | 75 |
| BI | 79 | 14 | 71 |
| EDC | 121 | 34 | 44 |
| FP | 44 | 5 | 20 |
| PI | 32 | 8 | 63 |
| PP | 94 | 22 | 59 |
| TFT | 601 | 153 | 56 |
| TNFT | 616 | 156 | 51 |

Cohort - entered "K" in 1969-70

TABLE 10

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 5 Later Year 1975-76 Later Grade 6

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 88 | 25 | 48 |
| BA | 142 | 56 | 63 |
| BI | 57 | 11 | 18 |
| EDC | 95 | 21 | 76 |
| FP | 33 | 5 | 100 |
| PI | 36 | 12 | 50 |
| PP | 97 | 23 | 70 |
| TFT | 548 | 153 | 60 |
| TNFT | - | 580 | 68 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 89 | 33 | 79 |
| BA | 139 | 39 | 74 |
| BI | 58 | 11 | 64 |
| EDC | 96 | 20 | 70 |
| FP | 34 | 8 | 38 |
| PI | 35 | 5 | 100 |
| PP | 94 | 38 | 79 |
| TFT | 545 | 154 | 74 |
| TNFT | - | 615 | 67 |

Cohort - entered "K" in 1969-70

TABLE 11

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 5 Later Year 1976-77 Later Grade 7

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 89 | 26 | 38 |
| BA | 137 | 52 | 58 |
| BI | 57 | 12 | 25 |
| EDC | 91 | 19 | 84 |
| FP | 33 | 5 | 100 |
| PI | 36 | 12 | 33 |
| PP | 99 | 23 | 74 |
| TFT | 542 | 149 | 57 |
| TNFT | - | 580 | 58 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 86 | 32 | 50 |
| BA | 134 | 38 | 37 |
| BI | 55 | 10 | 20 |
| EDC | 90 | 19 | 68 |
| FP | 32 | 7 | 29 |
| PI | 34 | 5 | 60 |
| PP | 95 | 38 | 45 |
| TFT | 526 | 149 | 45 |
| TNFT | - | 605 | 48 |

Cohort - entered "K" in 1969-70

TABLE 12

Postprogram Performance of Students Having Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 5 Later Year 1977-78 Later Grade 8

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 84 | 25 | 48 |
| BA | 129 | 53 | 53 |
| BI | 55 | 13 | 23 |
| EDC | 90 | 21 | 71 |
| FP | 32 | 5 | 80 |
| PI | 35 | 17 | 58 |
| PP | 91 | 21 | 78 |
| TFT | 516 | 150 | 57 |
| TNFT | | 574 | 61 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 85 | 34 | 47 |
| BA | 128 | 39 | 46 |
| BI | 54 | 11 | 55 |
| EDC | 91 | 18 | 72 |
| FP | 32 | 8 | 38 |
| PI | 34 | 5 | 40 |
| PP | 87 | 36 | 47 |
| TFT | 511 | 151 | 50 |
| TNFT | 0 | 599 | 48 |

Cohort - entered "K" 1968-1969

TABLE 13

Postprogram Performance of Students In a Follow Through Model *Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 6 Later Year 1976-77 Later Grade 8

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early Year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 46 | 16 | 50 |
| BA | 61 | 18 | 56 |
| BI | 59 | 5 | 60 |
| EDC | 98 | 36 | 61 |
| FP | 39 | 7 | 43 |
| PI | 17 | 4 | 50 |
| PP | 75 | 18 | 72 |
| TFT | 395 | 104 | 59 |
| TNFT | | 433 | 57 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 46 | 19 | 32 |
| BA | 61 | 12 | 67 |
| BI | 57 | 9 | 67 |
| EDC | 99 | 25 | 72 |
| FP | 39 | 7 | 71 |
| PI | 16 | 3 | 100 |
| PP | 74 | 15 | 33 |
| TFT | 392 | 90 | 57 |
| TNFT | | 428 | 46 |

*Data for students in the first cohort (entered "K" in 1968-69) were pieced together from available records; no exposure data were available therefore Maximum Exposure could not be determined.

Cohort - entered "K" 1968-1969

TABLE 14

Postprogram Performance of Students In a Follow Through Model *Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 6 Later Year 1975-76 Later Grade 7

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early Year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 43 | 14 | 64 |
| BA | 59 | 17 | 59 |
| BI | 61 | 5 | 40 |
| EDC | 95 | 37 | 65 |
| FP | 41 | 7 | 57 |
| PI | 19 | 5 | 80 |
| PP | 77 | 17 | 65 |
| TFT | 395 | 102 | 63 |
| TNFT | - | 435 | 59 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 42 | 17 | 47 |
| BA | 57 | 12 | 67 |
| BI | 62 | 8 | 50 |
| EDC | 94 | 25 | 84 |
| FP | 39 | 7 | 71 |
| PI | 14 | 2 | 100 |
| PP | 78 | 16 | 25 |
| TFT | 386 | 87 | 60 |
| TNFT | | 430 | 52 |

*Data for students in the first cohort (entered "K" in 1968-69) were pieced together from available records; no exposure data were available therefore Maximum Exposure could not be determined.

Cohort - entered "K" 1968-1969

TABLE 15

Postprogram Performance of Students In a Follow Through Model *Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 6 Later Year 1977-78 Later Grade 9

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early Year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 43 | 14 | 71 |
| BA | 57 | 15 | 60 |
| BI | 55 | 4 | 75 |
| EDC | 82 | 29 | 62 |
| FP | 35 | 7 | 71 |
| PI | 17 | 3 | 100 |
| PP | 74 | 18 | 67 |
| TFT | 363 | 90 | 67 |
| TNFT | - | 425 | 65 |

TOTAL MATHEMATICS

| | |
|---|---|
| BS | |
| BA | NOT TESTED IN GRADE 9 |
| BI | |
| EDC | |
| FP | |
| PI | |
| PP | |
| TFT | |
| TNFT | |

*Data for students in the first cohort (entered "K" in 1968-69) were pieced together from available records; no exposure data were available therefore Maximum Exposure could not be determined.

# APPENDIX B

Cohort - entered "K" in 1973-74

TABLE 1

Postprogram Performance of Students With Prekindergarten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated. Maximum Exposure and Pre-K Experience.

Early Year 1976-77 Early Grade 3 Later Year 1977-78 Later Grade 4

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 66 | 31 | 81 |
| BA | 112 | 58 | 66 |
| BI | 56 | 22 | 68 |
| EDC | 70 | 23 | 91 |
| FP | 21 | 9 | 33 |
| PI | 30 | 13 | 85 |
| PP | 85 | 40 | 65 |
| TFT | 440 | 196 | 71 |
| TNFT | 2042 | 747 | 73 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 66 | 38 | 58 |
| BA | 113 | 77 | 42 |
| BI | 56 | 28 | 54 |
| EDC | 71 | 37 | 51 |
| FP | 22 | 12 | 42 |
| PI | 29 | 11 | 45 |
| PP | 82 | 43 | 56 |
| TFT | 439 | 246 | 50 |
| TNFT | 2069 | 852 | 55 |

Cohort - entered "K" in 1972-73

TABLE 2

Postprogram Performance of Students With Prekindergarten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated. Maximum Exposure and Pre-K Experience.

Early Year 1975-76 Early Grade 3 Later Year 1976-77 Later Grade 4

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 85 | 41 | 66 |
| BA | 126 | 72 | 53 |
| BI | 64 | 21 | 71 |
| EDC | 96 | 29 | 79 |
| FP | 30 | 13 | 62 |
| PI | 33 | 16 | 75 |
| PP | 88 | 35 | 74 |
| TFT | 522 | 227 | 66 |
| TNFT | 1965 | 766 | 72 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 85 | 48 | 40 |
| BA | 125 | 91 | 37 |
| BI | 63 | 24 | 46 |
| EDC | 96 | 43 | 67 |
| FP | 31 | 17 | 59 |
| PI | 33 | 21 | 57 |
| PP | 88 | 52 | 48 |
| TFT | 521 | 296 | 47 |
| TNFT | 1975 | 891 | 52 |

Cohort - entered "K" in 1972-73

TABLE 3

Postprogram Performance of Students With Prekindergarten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated. Maximum Exposure and Pre-K Experience.

Early Year 1975-76 Early Grade 3 Later Year 1977-78 Later Grade 5

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 84 | 41 | 32 |
| BA | 124 | 72 | 39 |
| BI | 59 | 16 | 69 |
| EDC | 95 | 31 | 55 |
| FP | 28 | 12 | 33 |
| PI | 31 | 15 | 40 |
| PP | 82 | 33 | 33 |
| TFT | 503 | 220 | 41 |
| TNFT | 1933 | 762 | 54 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 82 | 48 | 58 |
| BA | 122 | 90 | 41 |
| BI | 58 | 21 | 62 |
| EDC | 97 | 45 | 62 |
| FP | 29 | 15 | 47 |
| PI | 31 | 19 | 68 |
| PP | 84 | 48 | 48 |
| TFT | 503 | 286 | 52 |
| TNFT | 1947 | 891 | 58 |

Cohort - entered "K" in 1971-72

TABLE 4

Postprogram Performance of Students With Prekindergarten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated. Maximum Exposure and Pre-K Experience

Early Year 1974-75 Early Grade 3 Later Year 1975-76 Later Grade 4

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 80 | 31 | 81 |
| BA | 142 | 78 | 67 |
| BI | 38 | 9 | 89 |
| EDC | 98 | 35 | 71 |
| FP | 31 | 5 | 100 |
| PI | 11 | 5 | 80 |
| PP | 68 | 39 | 77 |
| TFT | 468 | 202 | 74 |
| TNFT | 1117 | 443 | 70 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 80 | 41 | 61 |
| BA | 141 | 100 | 53 |
| BI | 38 | 8 | 75 |
| EDC | 98 | 45 | 67 |
| FP | 31 | 8 | 13 |
| PI | 11 | 6 | 50 |
| PP | 69 | 40 | 53 |
| TFT | 468 | 248 | 56 |
| TNFT | 1108 | 501 | 55 |

Cohort - entered "K" in 1971-72

TABLE 5

Postprogram Performance of Students With Prekindergarten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated. Maximum Exposure and Pre-K Experience.

Early Year 1974-75 Early Grade 3 Later Year 1976-77 Later Grade 5

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 80 | 30 | 57 |
| BA | 143 | 76 | 53 |
| BI | 38 | 7 | 57 |
| EDC | 105 | 38 | 63 |
| FP | 32 | 5 | 40 |
| PI | 11 | 5 | 40 |
| PP | 66 | 38 | 37 |
| TFT | 475 | 199 | 52 |
| TNFT | 1122 | 444 | 52 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 79 | 41 | 59 |
| BA | 143 | 100 | 45 |
| BI | 38 | 7 | 43 |
| EDC | 106 | 49 | 67 |
| FP | 32 | 8 | 63 |
| PI | 11 | 6 | 33 |
| PP | 67 | 38 | 71 |
| TFT | 476 | 249 | 56 |
| TNFT | 1121 | 505 | 63 |

Cohort - entered "K" in 1971-72

TABLE 6

Postprogram Performance of Students With Prekindergarten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated. Maximum Exposure and Pre-K Experience.

Early Year 1974-75 Early Grade 3 Later Year 1977-78 Later Grade 6

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 81 | 31 | 52 |
| BA | 144 | 79 | 49 |
| BI | 39 | 9 | 78 |
| EDC | 99 | 37 | 54 |
| FP | 32 | 5 | 40 |
| PI | 11 | 5 | 20 |
| PP | 66 | 38 | 42 |
| TFT | 472 | 204 | 50 |
| TNFT | 1106 | 437 | 59 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 81 | 42 | 52 |
| BA | 144 | 102 | 49 |
| BI | 39 | 7 | 57 |
| EDC | 100 | 48 | 63 |
| FP | 33 | 8 | 38 |
| PI | 11 | 6 | 33 |
| PP | 67 | 39 | 59 |
| TFT | 475 | 252 | 53 |
| TNFT | 1096 | 498 | 61 |

Cohort - entered "K" in 1970-71

TABLE 7

Postprogram Performance of Students With Prekindergarten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 4 Later Year 1975-76 Later Grade 5

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 92 | 43 | 42 |
| BA | 149 | 59 | 63 |
| BI | 79 | 19 | 21 |
| EDC | 126 | 35 | 46 |
| FP | 43 | 8 | 63 |
| PI | 27 | 12 | 42 |
| PP | 94 | 39 | 41 |
| TFT | 610 | 215 | 47 |
| TNFT | 647 | 228 | 57 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 89 | 33 | 67 |
| BA | 147 | 36 | 81 |
| BI | 78 | 14 | 79 |
| EDC | 127 | 37 | 68 |
| FP | 44 | 6 | 67 |
| PI | 27 | 7 | 71 |
| PP | 91 | 23 | 78 |
| TFT | 603 | 156 | 73 |
| TNFT | 648 | 163 | 70 |

Cohort - entered "K" in 1970-71

TABLE 8

Postprogram Performance of Students With Prekindergarten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 4 Later Year 1976-77 Later Grade 6

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 92 | 41 | 49 |
| BA | 151 | 57 | 51 |
| BI | 79 | 19 | 21 |
| EDC | 124 | 34 | 68 |
| FP | 47 | 9 | 67 |
| PI | 29 | 13 | 54 |
| PP | 97 | 40 | 43 |
| TFT | 619 | 213 | 50 |
| TNFT | 662 | 231 | 56 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 89 | 32 | 75 |
| BA | 151 | 37 | 70 |
| BI | 79 | 14 | 79 |
| EDC | 122 | 37 | 70 |
| FP | 47 | 6 | 67 |
| PI | 29 | 8 | 75 |
| PP | 94 | 23 | 74 |
| TFT | 611 | 157 | 73 |
| TNFT | 655 | 162 | 67 |

Cohort - entered "K" in 1970-71

TABLE 9

Postprogram Performance of Students With Prekindergarten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 4 Later Year 1977-78 Later Grade 7

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 89 | 40 | 45 |
| BA | 146 | 53 | 51 |
| BI | 71 | 17 | 53 |
| EDC | 116 | 32 | 63 |
| FP | 41 | 9 | 56 |
| PI | 30 | 13 | 62 |
| PP | 94 | 40 | 38 |
| TFT | 581 | 204 | 50 |
| TNFT | 619 | 218 | 53 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 82 | 32 | 41 |
| BA | 137 | 32 | 78 |
| BI | 76 | 13 | 69 |
| EDC | 115 | 34 | 44 |
| FP | 41 | 5 | 20 |
| PI | 29 | 8 | 63 |
| PP | 89 | 21 | 62 |
| TFT | 569 | 145 | 56 |
| TNFT | 616 | 156 | 51 |

Cohort - entered "K" in 1969-70

TABLE 10

Postprogram Performance of Students With Prekinderparten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 5 Later Year 1975-76 Later Grade 6

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 85 | 25 | 48 |
| BA | 138 | 55 | 64 |
| BI | 53 | 9 | 22 |
| EDC | 90 | 20 | 80 |
| FP | 30 | 4 | 100 |
| PI | 36 | 12 | 50 |
| PP | 92 | 23 | 70 |
| TFT | 524 | 148 | 61 |
| TNFT | - | 580 | 68 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 86 | 32 | 81 |
| BA | 135 | 39 | 74 |
| BI | 54 | 10 | 70 |
| EDC | 91 | 19 | 68 |
| FP | 31 | 7 | 29 |
| PI | 35 | 5 | 100 |
| PP | 89 | 36 | 78 |
| TFT | 521 | 148 | 74 |
| TNFT | - | 615 | 67 |

Cohort - entered "K" in 1969-70

TABLE 11

Postprogram Performance of Students With Prekinderparten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 5 Later Year 1976-77 Later Grade 7

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 86 | 26 | 38 |
| BA | 133 | 51 | 59 |
| BI | 54 | 10 | 30 |
| EDC | 87 | 19 | 84 |
| FP | 29 | 4 | 100 |
| PI | 36 | 12 | 33 |
| PP | 94 | 23 | 74 |
| TFT | 519 | 145 | 58 |
| TNFT | - | 580 | 58 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 85 | 32 | 50 |
| BA | 130 | 38 | 37 |
| BI | 52 | 9 | 22 |
| EDC | 86 | 19 | 68 |
| FP | 28 | 6 | 33 |
| PI | 34 | 5 | 60 |
| PP | 90 | 36 | 44 |
| TFT | 505 | 145 | 46 |
| TNFT | - | 605 | 48 |

Cohort - entered "K" in 1969-70

TABLE 12

Postprogram Performance of Students With Prekindergarten Experience Followed By Maximum Exposure In A Follow Through Model Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 5 Later Year 1977-78 Later Grade 8

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 82 | 25 | 48 |
| BA | 125 | 52 | 54 |
| BI | 51 | 11 | 27 |
| EDC | 86 | 20 | 70 |
| FP | 28 | 4 | 75 |
| PI | 35 | 12 | 58 |
| PP | 86 | 21 | 76 |
| TFT | 493 | 145 | 57 |
| TNFT | - | 574 | 61 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 83 | 33 | 48 |
| BA | 124 | 39 | 46 |
| BI | 50 | 10 | 60 |
| EDC | 87 | 17 | 71 |
| FP | 28 | 7 | 43 |
| PI | 34 | 5 | 40 |
| PP | 82 | 34 | 50 |
| TFT | 488 | 145 | 74 |
| TNFT | - | 599 | 48 |

# APPENDIX C

Cohort - entered "K" in 1973-74

TABLE 1

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1976-77 Early Grade 3 Later Year 1977-78 Later Grade 4

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 58 | 27 | 70 |
| BA | 72 | 39 | 59 |
| BI | 22 | 11 | 82 |
| EDC | 27 | 12 | 83 |
| FP | 15 | 3 | 100 |
| PI | 1 | 0 | 0 |
| PP | 68 | 32 | 72 |
| TFT | 263 | 124 | 70 |
| TNFT | 2042 | 747 | 73 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 58 | 30 | 57 |
| BA | 72 | 52 | 42 |
| BI | 23 | 15 | 60 |
| EDC | 27 | 11 | 73 |
| FP | 15 | 12 | 33 |
| PI | 1 | 0 | 0 |
| PP | 66 | 37 | 65 |
| TFT | 262 | 157 | 54 |
| TNFT | 2069 | 852 | 55 |

Cohort - entered "K" in 1972-73

TABLE 2

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1975-76 Early Grade 3 Later Year 1976-77 Later Grade 4

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 51 | 31 | 71 |
| BA | 64 | 36 | 53 |
| BI | 35 | 14 | 86 |
| EDC | 59 | 23 | 78 |
| FP | 21 | 11 | 64 |
| PI | 23 | 13 | 92 |
| PP | 52 | 28 | 82 |
| TFT | 313 | 156 | 72 |
| TNFT | 1965 | 766 | 72 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 59 | 35 | 40 |
| BA | 64 | 48 | 35 |
| BI | 34 | 14 | 64 |
| EDC | 59 | 36 | 69 |
| FP | 21 | 10 | 60 |
| PI | 23 | 18 | 61 |
| PP | 57 | 34 | 59 |
| TFT | 312 | 195 | 52 |
| TNFT | 1975 | 891 | 52 |

Cohort - entered "K" in 1972-73

TABLE 3

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 3 Later Year 1977-78 Later Grade 5

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 60 | 28 | 29 |
| BA | 73 | 43 | 49 |
| BI | 22 | 4 | 75 |
| EDC | 33 | 11 | 27 |
| FP | 21 | 10 | 30 |
| PI | 7 | 7 | 43 |
| PP | 45 | 25 | 44 |
| TFT | 261 | 128 | 41 |
| TNFT | 1933 | 762 | 54 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 59 | 35 | 57 |
| BA | 72 | 52 | 44 |
| BI | 22 | 8 | 50 |
| EDC | 34 | 13 | 54 |
| FP | 20 | 9 | 56 |
| PI | 7 | 6 | 100 |
| PP | 46 | 29 | 59 |
| TFT | 260 | 152 | 54 |
| TNFT | 1947 | 891 | 58 |

Cohort - entered "K" in 1971-72

TABLE 4

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 3 Later Year 1975-76 Later Grade 4

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 58 | 21 | 76 |
| BA | 97 | 55 | 67 |
| BI | 18 | 6 | 83 |
| EDC | 65 | 28 | 79 |
| FP | 21 | 3 | 100 |
| PI | 8 | 4 | 100 |
| PP | 54 | 31 | 81 |
| TFT | 321 | 148 | 76 |
| TNFT | 1117 | 443 | 70 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 58 | 29 | 55 |
| BA | 96 | 71 | 54 |
| BI | 18 | 5 | 60 |
| EDC | 65 | 32 | 75 |
| FP | 100 | 5 | 20 |
| PI | 8 | 6 | 59 |
| PP | 55 | 32 | 63 |
| TFT | 321 | 180 | 58 |
| TNFT | 1108 | 501 | 55 |

Cohort - entered "K" in 1971-72

TABLE 5

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 3 Later Year 1976-77 Later Grade 5

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 58 | 21 | 62 |
| BA | 90 | 56 | 57 |
| BI | 17 | 3 | 67 |
| EDC | 61 | 26 | 65 |
| FP | 16 | 1 | 100 |
| PI | 7 | 3 | 67 |
| PP | 50 | 30 | 30 |
| TFT | 299 | 140 | 54 |
| TNFT | 1122 | 444 | 52 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 57 | 31 | 55 |
| BA | 89 | 65 | 51 |
| BI | 17 | 4 | 25 |
| EDC | 61 | 32 | 72 |
| FP | 16 | 3 | 67 |
| PI | 7 | 5 | 40 |
| PP | 51 | 28 | 75 |
| TFT | 298 | 168 | 59 |
| TNFT | 1121 | 503 | 63 |

Cohort - entered "K" in 1971-72

TABLE 6

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 3 Later Year 1977-78 Later Grade 6

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 58 | 21 | 38 |
| BA | 90 | 53 | 47 |
| BI | 7 | 3 | 67 |
| EDC | 32 | 13 | 54 |
| FP | 17 | 1 | 100 |
| PI | - | - | - |
| PP | 44 | 25 | 48 |
| TFT | 248 | 116 | 47 |
| TNFT | 1106 | 437 | 59 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 58 | 33 | 55 |
| BA | 89 | 67 | 51 |
| BI | 7 | 1 | 100 |
| EDC | 32 | 15 | 40 |
| FP | 17 | 4 | 50 |
| PI | - | - | - |
| PP | 44 | 28 | 61 |
| TFT | 247 | 148 | 53 |
| TNFT | 1096 | 498 | 61 |

Cohort - entered "K" in 1970-71

TABLE 7

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 4 Later Year 1975-76 Later Grade 5

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 65 | 30 | 43 |
| BA | 81 | 40 | 60 |
| BI | 32 | 7 | 14 |
| EDC | 56 | 17 | 53 |
| FP | 19 | 1 | 0 |
| PI | 18 | 11 | 45 |
| PP | 56 | 28 | 36 |
| TFT | 327 | 134 | 46 |
| TNFT | 647 | 228 | 57 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 64 | 23 | 65 |
| BA | 81 | 23 | 83 |
| BI | 30 | 4 | 75 |
| EDC | 56 | 19 | 74 |
| FP | 20 | 2 | 50 |
| PI | 18 | 6 | 67 |
| PP | 56 | 21 | 86 |
| TFT | 325 | 98 | 76 |
| TNFT | 648 | 163 | 70 |

Cohort - entered "K" in 1970-71

TABLE 8

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 4 Later Year 1976-77 Later Grade 6

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 57 | 28 | 54 |
| BA | 69 | 30 | 50 |
| BI | 23 | 6 | 0 |
| EDC | 41 | 13 | 69 |
| FP | 18 | 1 | 0 |
| PI | 17 | 10 | 60 |
| PP | 46 | 22 | 50 |
| TFT | 271 | 110 | 51 |
| TNFT | 662 | 231 | 56 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 57 | 19 | 74 |
| BA | 68 | 19 | 74 |
| BI | 23 | 3 | 33 |
| EDC | 41 | 16 | 56 |
| FP | 18 | 1 | 0 |
| PI | 17 | 7 | 71 |
| PP | 46 | 17 | 94 |
| TFT | 210 | 82 | 72 |
| TNFT | 655 | 162 | 67 |

Cohort - entered "K" in 1970-71

TABLE 9

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 4 Later Year 1977-78 Later Grade 7

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 45 | 24 | 50 |
| BA | 65 | 28 | 43 |
| BI | 14 | 4 | 50 |
| EDC | 46 | 17 | 76 |
| FP | 16 | 2 | 100 |
| PI | 19 | 11 | 64 |
| PP | 43 | 24 | 42 |
| TFT | 248 | 110 | 53 |
| TNFT | 619 | 218 | 53 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 44 | 18 | 39 |
| BA | 64 | 16 | 88 |
| BI | 14 | 2 | 50 |
| EDC | 46 | 18 | 56 |
| FP | 16 | 2 | 0 |
| PI | 19 | 7 | 57 |
| PP | 42 | 17 | 65 |
| TFT | 249 | 80 | 59 |
| TNFT | 616 | 156 | 51 |

Cohort - entered "K" in 1969-70

TABLE 10

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 5 Later Year 1975-76 Later Grade 6

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 58 | 18 | 50 |
| BA | 71 | 39 | 56 |
| BI | 19 | 4 | 25 |
| EDC | 47 | 10 | 80 |
| FP | 10 | 0 | 0 |
| PI | 19 | 7 | 29 |
| PP | 61 | 17 | 71 |
| TFT | 285 | 95 | 57 |
| TNFT | | 580 | 68 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 58 | 22 | 82 |
| BA | 70 | 29 | 72 |
| BI | 19 | 4 | 0 |
| EDC | 47 | 10 | 60 |
| FP | 10 | 2 | 50 |
| PI | 18 | 3 | 100 |
| PP | 61 | 28 | 75 |
| TFT | 283 | 98 | 71 |
| TNFT | - | 615 | 67 |

Cohort - entered "K" in 1969-70

TABLE 11

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 5 Later Year 1976-77 Later Grade 7

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 41 | 15 | 33 |
| BA | 50 | 27 | 59 |
| BI | 10 | 4 | 50 |
| EDC | 33 | 9 | 89 |
| FP | 6 | 0 | 0 |
| PI | 16 | 6 | 17 |
| PP | 15 | 49 | 80 |
| TFT | 205 | 76 | 58 |
| TNFT | | 580 | 58 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 40 | 16 | 40 |
| BA | 50 | 23 | 35 |
| BI | 9 | 3 | 33 |
| EDC | 33 | 9 | 44 |
| FP | 6 | 1 | 100 |
| PI | 15 | 2 | 100 |
| PP | 49 | 24 | 50 |
| TFT | 202 | 78 | 45 |
| TNFT | - | 605 | 48 |

Cohort - entered "K" in 1969-70

TABLE 12

Postprogram Performance of Students With Maximum Exposure in A Follow Through Model Who Were Absent Fewer Than 15 Days and Who Scored At or Above the National 50th. Percentile on Total Reading and Total Mathematics Sections of the California Achievement Test (CAT) In the Grades and Years Indicated.

Early Year 1974-75 Early Grade 5 Later Year 1977-78 Later Grade 8

TOTAL READING

| MODEL | N | N Above the 50th NPR In Early year. | Percentage Remaining Above 50th. NPR in Later Year. |
|---|---|---|---|
| BS | 50 | 19 | 42 |
| BA | 56 | 28 | 57 |
| BI | 9 | 5 | 20 |
| EDC | 45 | 10 | 80 |
| FP | 8 | 0 | 0 |
| PI | 18 | 6 | 50 |
| PP | 31 | 7 | 86 |
| TFT | 217 | 75 | 56 |
| TNFT | | 574 | 61 |

TOTAL MATHEMATICS

| | | | |
|---|---|---|---|
| BS | 50 | 21 | 52 |
| BA | 54 | 23 | 48 |
| BI | 9 | 4 | 50 |
| EDC | 45 | 11 | 73 |
| FP | 8 | 2 | 50 |
| PI | 17 | 2 | 50 |
| PP | 31 | 18 | 50 |
| TFT | 214 | 81 | 53 |
| TNFT | 0 | 599 | 48 |